

# Greenhouse Gas Emissions Inventory and Annual Streamlined Energy & Carbon Report

Hillside Environmental Services  
Year 2019



# HILLSIDE



environmental services

## Contents

1. Environment.....	3
2. Carbon emissions .....	4
3. Energy management.....	4
4. Transport management.....	5
5. Waste and resources management .....	6
6. Sequestration .....	6
7. Carbon report.....	7

## 1. Environment

We are committed to reducing our operations' environmental impact by improving our energy efficiency, reducing the consumption of our natural resources, and managing our waste to progressively decrease our carbon emissions.

In 2007 we planted 7,200 broadleaf trees and converted 3.2 hectares of arable land to natural woodland. This project has continued to thrive, improving biodiversity and establishing a natural habitat for wildlife to flourish, as well as sequestering carbon from the atmosphere, offsetting our carbon footprint. ([ref Forestry Commission report "Forests, Carbon and Climate Change: the UK Contribution"](#))

During 2019 we installed new technology to electrify our building energy requirements and converted our grid supply arrangements to 100% green energy, effectively net zeroing our energy-related emission.

The main channel of operational emissions is now transport-related. As the business moves to a "**new normal**" post lockdown, we will focus on changes to transport habits and methods to reduce our environmental impacts further.



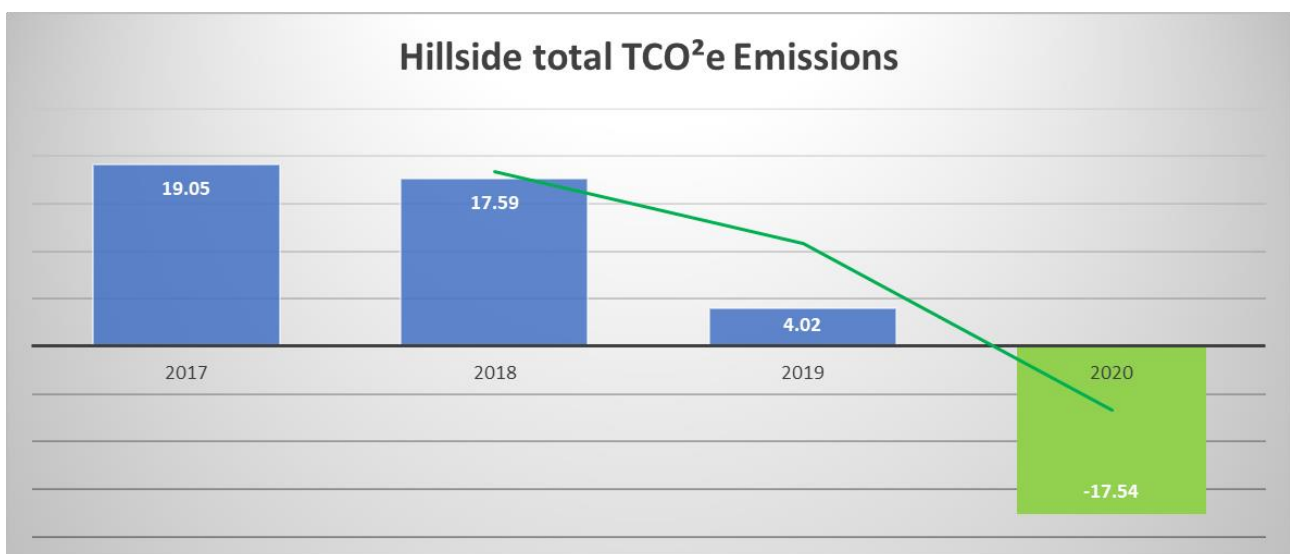
## 2. Carbon emissions

During 2019 our net emissions of CO<sub>2</sub>e were 4.02 tonnes - a 77% reduction over 2018 and a 79% reduction since 2017.

These improvements have arisen due to the technology investments made during 2019, the changes to the business's operational boundary, involving a reduction in transatlantic flights from our activity.

During 2020 the ongoing impact of pandemic lockdown has effectively removed all transport emission, and our current emissions profile midway through 2020 stands at **(-17.5 TCO<sub>2</sub>e)**.

Our expectation of "new normal" will be a net negative of **(-11 TCO<sub>2</sub>e)** ahead of further investments into transport and on-site energy storage.



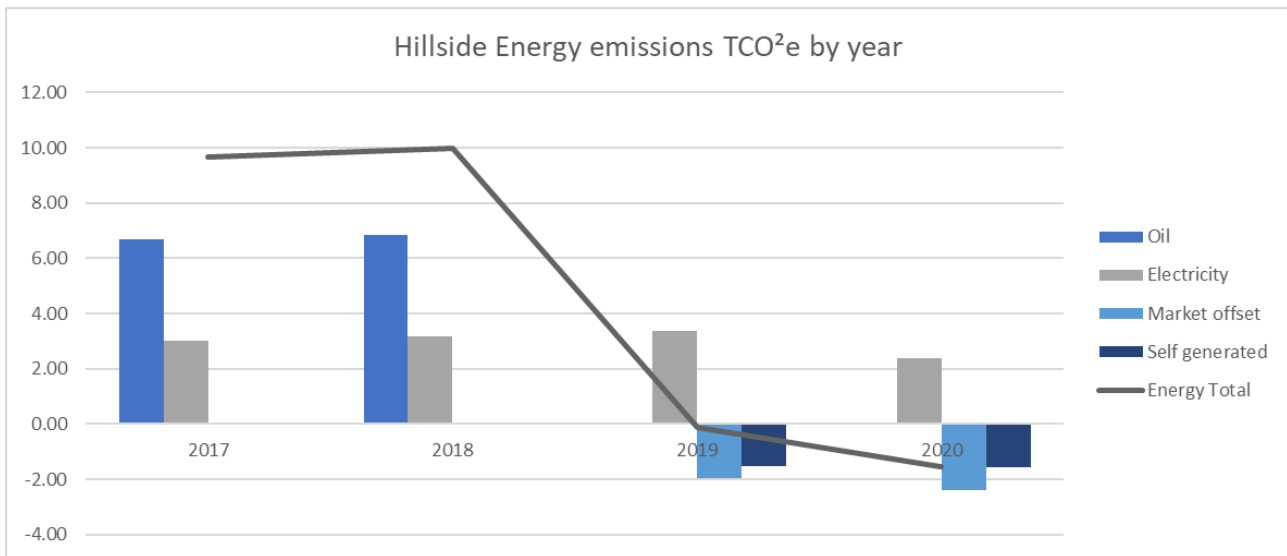
Having achieved a negative carbon footprint, we will continue to focus on reducing our overall carbon emissions across all business activities, encouraging supply chain participation in reducing scope 3 emissions impacts on our clients.

## 3. Energy management

Following a programme of building energy efficiency improvements, covering controls, insulation, and lighting, during 2019, we made further investments into the building energy system, installing

- A ground source heat pump system, removing 2,100 litres of heating oil from our annual energy mix
- A Solar Photovoltaic array sized to meet some of the additional electricity loads of the heat pump system.
- Contracted a 100% renewable electricity grid supply with Bulb Energy, ensuring all of our building energy needs were free of carbon emissions.

Completed part way through 2019, the impact on our greenhouse gas emissions profile has been immediate and significant, including generating a surplus of electricity exported to the grid.



This export activity has established an annual offset opportunity that will further reduce our future greenhouse gas emissions.

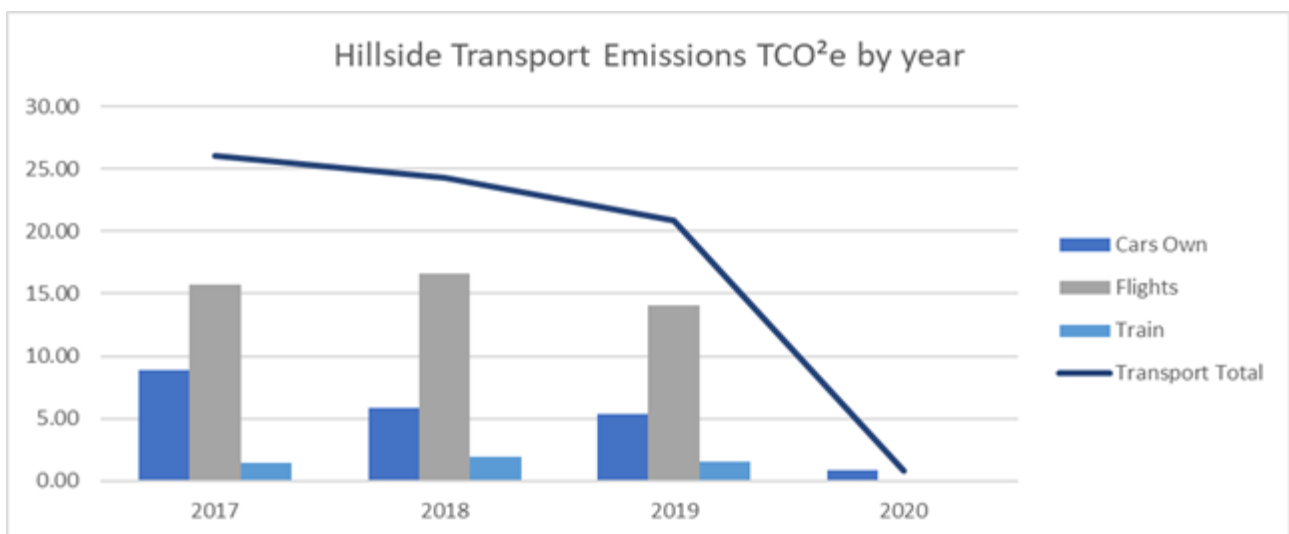
2020 will be the first full year of system operation, and the targets set have already been achieved by September, with a forecast that our associated annual emissions from energy will be **-1.5TCO<sup>2</sup>e**

#### 4. Transport management

Transport remains our largest greenhouse gas emissions source, covering all scope 1 & 3 emissions in Road, Rail and Air travel.

During 2019 transport emissions were **20.89 TCO<sup>2</sup>e**, with air travel the largest source of emissions.

Towards the end of 2019, the business withdrew from North America activities, reducing the need for transatlantic travel, which will positively impact our transport emissions profile in the future.



The 2020 pandemic lockdown has had the most significant impact on transport emissions, reducing all travel forms to virtually zero and forcing the business to embed remote working and virtual meetings into our day-to-day activity.

We expect these new working practices to continue into the "New Normal" and further reduce our transport emissions. However, these operational shifts will not entirely displace our transport requirements, and we have forecast associated emissions to level out at around 6TCO<sup>2</sup>e per year if we continue to use fossil fuel-powered vehicles.

Consequently, we have decided that before June 2022, we will change the current fleet to electric vehicles and remove greenhouse gas emissions from our road transport inventory.

## 5. Waste and resources management

Waste, water, and other emissions associated with our activities created 0.28 tCO<sup>2</sup>e in 2019. We will continue to reduce the volume of waste we produce and increase the recycling we do.

In the year we

- Composted all food waste on-site, covering around 4% of the total waste generated
- Sorted and Recycled 55% of the waste generated &
- Sent 41% to landfill

Our landfill waste is primarily unrecyclable packaging, where more comprehensive recycling is restricted by limited facilities within our local authority area.

## 6. Sequestration

In 2007 we created the Hillside woodland project to sequester our surplus carbon emissions and reduce our net greenhouse gas profile. Using the woodland carbon calculator, developed by the [UK Woodland Carbon Code](#), we have sequestered 85 – 100 TCO<sup>2</sup>e during that period.

Adopting these standards over the project's life, we will sequester 1,294 TCO<sup>2</sup>e (around 12 TCO<sup>2</sup>e per year).

The Woodland Carbon Code is the UK government-backed standard for woodland carbon projects and was launched in 2011. As our project pre-dates this framework, it cannot be officially registered under this code, and our declared sequestration can only be recorded as self-assessed.

We continue to collaborate with the forestry commission to promote the benefits of the Woodland Carbon Code and ensure our project remains aligned to the standards.

## 7. Carbon report

		2017 (Base year)		2019	
Type of Emission	Activity	tCO <sub>2</sub> e	activity	tCO <sub>2</sub> e	activity
<b>Scope 1 (direct)</b>	Oil combustion (liters)	6.68	2,100	0.00	0.0
	Vehicle Fleet (miles)	8.88	31,500	5.31	18,500
	Refrigerants (F-Gas's)	0.00	0	0.00	
<b>Scope 2 (direct)</b>	Grid Electricity (location) kWh's	3.00	11,750	3.36	13,150
<b>Scope 3 (Indirect)</b>	Air travel (kilometers)	15.7	86,854	14.04	77,646
	Rail travel (kilometers)	1.44	35,000	1.54	37,500
	Grey fleet	0.00	0.0	0.00	0.0
	Water (cubic meters)	0.3	325	0.24	265
	Waste (tonnes)	0.06	0.96	0.04	0.96
<b>Gross TCO<sub>2</sub>e pre offset</b>		<b>36.05</b>		<b>21.06</b>	
<b>Offsets</b>	Market-based grid electricity	0.00		(1.94)	
	Self-Generated electricity	0.00		(1.53)	
	Sequestration – Tree plantation	(17.00)		(17.00)	
	Other	0.00		0.00	
<b>Net TCO<sub>2</sub>e</b>		<b>19.05</b>		<b>4.06</b>	

### Intensity ratios

<b>Employees</b>	2	10.025	3.325
<b>Building M<sup>2</sup></b>	232	0.086	0.028

### Assessment parameters

<b>Baseline year</b>	2017
<b>Reporting Organisation</b>	Hillside MS Ltd. TA Hillside Environmental Services
<b>Person Responsible</b>	R.Burton - Director
<b>Reporting period covered</b>	Annual full year to 31st Dec 2019
<b>Organisation boundaries</b>	Facilities over which Hillside Environmental has operational control
<b>Methodology used</b>	GHG protocols Corporate standards and SECR Reporting guidelines
<b>Emissions factors used</b>	UK Government conversion factors for Company set
<b>Exclusions</b>	None
<b>Included Scope 3 emissions</b>	Waste, Water & Transport
<b>Scope 2 emissions</b>	Combined Location & market-based emissions factors, with self-generated offset
<b>Sequestration</b>	Woodland Carbon Code - carbon calculator